

Appl. No. 10/054,623
Reply to Office Action of May 03, 2006
Docket. No.: 2102299-991110

REMARKS

Applicants appreciate the thorough examination of the application that is reflected in the Office Action dated May 3, 2006, and thank the Examiner for withdrawing the rejection of claims 1-4, 6-12, 19-22 and 24-26 under 35 U.S.C. 102(b) as being anticipated by Flores (U.S. 5,630,069), and for withdrawing the rejection of claims 13-18 under 35 U.S.C. 103(a) as being unpatentable over Flores (U.S. 5,630,069) in view of Ambler (U.S. 6,393,456).

To expedite prosecution of this application, Applicants amend each of the independent claims to further clarify aspects of the invention and to even further distinguish over the cited references. Support for these amendments can be found throughout the application and drawings, as shown for example, in originally filed claim 24. Applicants also amend the preambles of claims 1-4, 6-14, 16-18.

For example, Applicants amend claim 13 to include some of the limitations of claim 24 and cancel claim 24 without prejudice. Amended claim 13 now recites "a graphical user interface adapted to allow a user to visually build a single workflow describing a multi-channel application capable of operating over a plurality of channels, the workflow comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein said single workflow comprises a plurality of states and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application." In addition, Applicants amend the preambles of claims 13, 14 and 16-18 to recite a computer system for visually building a multi-channel application capable of operating over a plurality of channels.

Amended claim 1 now recites "a first module adapted to allow a developer to visually design workflow describing a multi-channel application capable of operating over a plurality of channels, the workflow comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein said workflow comprises a plurality of states and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application." In addition, Applicants amend the preambles of claims 1-4 and 6 to recite a computer-readable medium having computer-executable modules.

Amended claim 7 now recites "a graphical user interface (GUI) comprising a user interface selection device and a display for displaying an interactive development environment

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for visually designing workflow describing a multi-channel application capable of operating over a plurality of channels, said environment being adapted to allow a developer to independently design said workflow in a plurality of layers, wherein each layer includes states and transitions common to at least one channel of said multi-channel application.” In addition, Applicants amend the preambles of claims 7-12 to recite a computer system for visually building multi-channel applications.

Amended claim 19 now recites “designing an application workflow within said visual development environment in a plurality of layers, said application workflow describing certain business logic and comprising a plurality of states and a plurality of transitions, wherein said application workflow describes a multi-channel application capable of operating over a plurality of channels, wherein the application workflow comprises a plurality of layers, wherein each layer includes states and transitions common to at least one channel of said multi-channel application.”

Claims 1-4, 6-14, 16-22 and 25-26 (22 total claims; 4 independent claims) remain pending in the application. Applicants respectfully request reexamination and reconsideration of the application.

Oath/Declaration

Applicants note the objection and will submit a new oath or declaration which complies with 37 CFR 1.67(a) and MPEP §§ 602.01 and 602.02. Applicants’ representative is still diligently trying to contact one the Applicants to obtain his signature.

Claims Rejections Under 35 USC 101

The Official Action rejects claims 1-18 under 35 U.S.C. 101 because claims 1, 7 and 13 allegedly “recite steps that do not require any hardware element,” and “recite functional descriptive material which does not fall under any of the statutory categories.”

Applicants respectfully disagree. Nevertheless, to expedite prosecution of this application, Applicants amend the preambles of claims 1-4, 6-14, 16-18 as shown and discussed above. For example, the preamble of claim 1 now recites a computer-readable medium having computer-executable modules; the preamble of claim 7 now recites a computer system for visually building multi-channel applications; and the preamble of claim 13 now recites a computer system for visually building a multi-channel application capable of operating over a plurality of channels.

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Accordingly, for at least the foregoing reasons, Applicants respectfully request that the rejections of claims 1-4, 6-14, 16-18 be withdrawn.

Art-Based Rejections

Claims 1-4, 6-12, 19-22 and 24-26

The Official Action rejects claims 1-4, 6-12, 19-22 and 24-26 under 35 U.S.C. 103(a) as being unpatentable over Flores (U.S. 5,630,069) in view of Christfort (US 2002/0138617 A1).

As noted above, to expedite prosecution of this application, each of the independent claims including claim 1 has been amended to include some of the recitations included in claim 24, and claim 24 has been cancelled without prejudice or disclaimer.

To establish a prima facie case of obviousness, three basic criteria must be met. First, there must be some suggestion or motivation to modify a reference or to combine the teachings of multiple references. Second, there must be a reasonable expectation of success. Third, the prior art must teach or suggest all of the recited claim limitations. Of course, the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, not in Applicants' disclosure. Applicants respectfully submit that the Examiner has not met all of the above criteria.

Independent Claim 1

Claim 1 relates a computer-readable medium having computer-executable modules in a system for visually building multi-channel applications. The computer-readable medium comprises:

a first module adapted to allow a developer to visually design workflow describing a multi-channel application capable of operating over a plurality of channels, the workflow comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein said workflow comprises a plurality of states and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application;

a second module adapted to allow a developer to design views for said multi-channel application; and

a third module adapted to allow a developer to integrate data sources within said multi-channel application. (Emphasis added.)

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Paragraph [0130] of the present application defines a "channel" as "the medium, or the "pipe" over which user interaction takes place. The main channels of access are: "wire-line" access over the Internet; "wireless" data access over cellular and other over-the-air networks; and voice access over analog PSTN networks."

Applicants respectfully traverse this rejection for at least the following reasons.

1. The cited references fail to teach or suggest "workflow describing a multi-channel application capable of operating over a plurality of channels," as required by claim 1.

In rejecting claim 1 the Office Action dated May 03, 2006 cites col. 5, lines 35-40 and col. 7, lines 10-30 of the Flores reference. Col. 5, lines 35-40 of the Flores reference discloses "a GUI application that allows a business process analyst to specify the map of business processes with its network of workflows. Its output is readable by the application builder which will update the definitions database of the server." Col. 7, lines 10-30 of the Flores reference further discusses that "[t]he user is prompted for confirmation on deletion of workflows and links. Objects such as workflows, links, annotated text, etc. may be moved around on the screen by typical clicking and dragging of a mouse as occurs in a GUI. The invention produces standard workflow maps of business processes that show workflows and the links defined between workflows." (Flores at column 7: 10-30; emphasis added.)

As noted in the previous response with respect to the Flores reference, (1) the workflows do not describe a multi-channel application, and (2) the workflow enabled application of Flores is not capable of operating over a plurality of channels.

The Office appears to agree and concedes that the Flores reference "does not explicitly teach a multi-channel application capable of operating over a plurality of channels, comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application." See Office Action dated May 03, 2006 at page 3, paragraph bridging pages 3 and 4. To meet these deficiencies of the Flores reference, the Office cites paragraphs [0066] and [0095] of the Christfort reference. See Office Action dated May 03, 2006 at page 4, first full paragraph. Paragraph [0066] of the Christfort reference discusses that:

"[0066] FIG. 1A also illustrates end users 130, 132, 134 that are connected to host server 110 by connections 140, 142, 144. Although end users 130,

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132, 134 are shown external to network 100 in FIG. 1, and users 130, 132, 134 or other end users not shown may also be part of network 100. There are a number of different types of end users and connections. For example, end user 130 may be a desktop computer that is connected to host server 110 through a variety of ways, such as via the Internet, a DSL connection, or an ISDN. Also, end user 132 may be a PDA that is connected to host server 110 via a cellular modem connection. Further, end user 134 may be a mobile phone that is connected to the Internet and thereby to host server 110 via a WAP-to-HTTP gateway." (Emphasis added.)

Paragraph [0095] of the Christfort reference discusses that:

"[0095] As soon as a service has been created and/or revised, end users or customers that can connect to the network on which the server resides (e.g., the Internet) can access the service. The process by which the service is accessed may vary based on the type of end user. For example, a desktop computer can connect to the Internet through a dial-up line, a DSL connection, a cable modem, an ISDN connection or many other available methods. WAP phones may connect to the Internet over a wireless connection using a synchronous protocol, such as through a WAP-to-HTTP gateway, or using an asynchronous protocol, such as the simple mail transfer protocol (SMTP) or the short message service (SMS) protocol." (Emphasis added.)

Applicants submit that the cited portions of the Christfort reference fail to cure the deficiencies of the Flores reference acknowledged in the Office Action. The Christfort reference merely discloses the concept of a single application and a middleware transformer 112 which filters the output from that application (i.e., selects particular output segments of that application) to produce a customized output which it sends to the end user, but does not suggest that a workflow describes a multi-channel application capable of operating over a plurality of channels. The "customized output" of the Christfort et al. reference refers to output of the application that varies. Thus, Applicants submit that the cited references, including Christfort, fail to teach or suggest, for example, "a first module adapted to allow a developer to visually design workflow describing a multi-channel application capable of operating over a plurality of channels," as required by claim 1.

2. *The cited references also fail to teach or suggest that the workflow comprises "a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein said workflow comprises a plurality of states and a*

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plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application," as required by claim 1.

In the Office Action dated May 03, 2006, the Office rejects claim 24 based on col. 3, lines 56-67 of the Flores reference and paragraphs [0066] and [0095] of the Christfort reference. Col. 3, lines 56-67 of the Flores reference discusses that:

"A workflow can be linked (and initiate) multiple workflows from one of its phases. If all the workflows start at the same moment, the multiple workflows are said to have started in parallel. Multiple workflows can also be started serially. There are two mechanisms to indicate the serialization of workflows. As illustrated in FIG. 2, workflows serial 1 and serial 2 are sequential workflows. The primary workflow at the beginning of the agreement phase, has a link to start workflow serial 1. Workflow serial 2 is linked from the satisfaction phase of workflow serial 1. Upon satisfaction of workflow serial 2, there is a link back to the primary workflow." (Flores at column 3: 56-67; emphasis added.)

The cited section of the Flores reference merely discloses the concept of a "workflow" application. However, there is no indication in the Flores reference that the workflows "comprise layers corresponding to channels of the workflow enabled application. Moreover, there is no indication in the Flores reference that each layer includes states and transitions common to at least one channel of said multi-channel application.

Paragraphs [0066] and [0095] of the Christfort reference, reproduced above, are similarly deficient.

Thus, Applicants submit that the cited references also fail to teach or suggest, for example, that the workflow comprises "a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein said workflow comprises a plurality of states and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application," as required by claim 1.

Accordingly, for at least the reasons stated above, Applicants submit that the cited references fail to teach or suggest, for example, "a first module adapted to allow a developer to visually design workflow describing a multi-channel application capable of operating over a plurality of channels, the workflow comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein said workflow

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comprises a plurality of states and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application,” as required by claim 1.

For at least the foregoing reasons, Applicants submit that claim 1, and its dependent claims 2-4 and 6, are patentable over the cited references. In addition, Applicants submit that many of the dependent claims are separately patentable since the cited references fails to teach recitations present in those claims.

Independent Claim 7

Claim 7 relates to a computer system for visually building multi-channel applications.

Claim 7 requires:

a graphical user interface (GUI) comprising a user interface selection device and a display for displaying an interactive development environment for visually designing workflow describing a multi-channel application capable of operating over a plurality of channels,

said environment being adapted to allow a developer to independently design said workflow in a plurality of layers, wherein each layer includes states and transitions common to at least one channel of said multi-channel application.
(Emphasis added.)

For at least the reasons stated above with respect to claim 1, Applicants submit that the cited references fails to teach an environment for “visually designing workflow describing a multi-channel application capable of operating over a plurality of channels, said environment being adapted to allow a developer to independently design said workflow in a plurality of layers, wherein each layer includes states and transitions common to at least one channel of said multi-channel application,” as recited in claim 7. Accordingly, for at least the foregoing reasons, Applicants submit that claim 7, and its dependent claims 8-12, are patentable over the cited references.

In addition, Applicants submit that many of the dependent claims are separately patentable since they include limitations not taught by the cited references.

For example, the Office Action also rejects dependent claims 9- 12 based on paragraphs [0066] and [0095] of the Christfort reference which are reproduced above. Dependent claim 9 requires that the “GUI is adapted to independently display a root layer including states common

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to each of said channels of said multi-channel application, and to allow a developer to visually design said root layer.” Dependent claim 10 requires that the “GUI is further adapted to independently display a voice layer including states common to a voice channel of said multi-channel application, and to allow a developer to visually design said voice layer.” Dependent claim 11 requires that the “GUI is further adapted to independently display a visual layer including states common to a visual channel of said multi-channel application, and to allow a developer to visually design said visual layer.” Dependent claim 12 requires that the “GUI is further adapted to display combinations of said root, voice and visual layers.” Applicants submit that the cited sections of the Flores and Christfort references fail to teach at least the above-underlined recitations of claims 9- 12. Accordingly, Applicants submit that dependent claims 9- 12 are also separately patentable.

Independent claim 19

For at least the reasons stated above with respect to claim 1, Applicants submit that the cited references fail to teach, for example, that the “designing an application workflow within said visual development environment in a plurality of layers, said application workflow comprising a plurality of states and a plurality of transitions, wherein said application workflow describes a multi-channel application capable of operating over a plurality of channels, wherein the application workflow comprises a plurality of layers, wherein each layer includes states and transitions common to at least one channel of said multi-channel application,” as required by claim 19.

Applicants further submit that the cited references fail to teach, for example, “converting said application workflow into an application descriptor for delivering the application over at least one of the plurality of channels,” as required by claim 19. Applicants submit there is absolutely no suggestion of this recitation in the cited references. Applicants respectfully request that the Examiner provide a citation in the references which teaches this recitation.

Accordingly, for at least the foregoing reasons, Applicants submit that claim 19, and its dependent claims 20-23 and 25-26, are patentable over the cited references.

In addition, Applicants submit that many of the claims dependent on claim 19 are separately patentable. For example, dependent claim 25 requires “componentizing a plurality of said states and transitions into a reusable sub-model within said visual development

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environment.” Dependent claim 26 requires “packaging said application workflow into a reusable component within said visual development environment.” The Office Action rejects claims 25 and 26 based upon column 4:53-57 of the Flores reference, which states that the “definitions database contains records that define each type of business process and workflow in the system. These records are used by the workflow updater and workflow processor to determine new workflow states and available actions.” Applicants submit that the Flores reference fails to teach at least the above-underlined recitations of claims 25 and 26. Accordingly, for at least the foregoing reasons, Applicants submit that claims 25 and 26 are separately patentable over the cited references.

Independent Claim 13

The Office Action rejects claims 13-14 and 16-18 under 35 U.S.C. 103(a) as being unpatentable over Flores (U.S. 5,630,069) in view of Christfort (US 2002/0138617 A1) and further in view of Ambler (U.S. 6,393,456).

For at least the reasons discussed above with respect to claim 1, Applicants submit that the Flores and Christfort references fail to teach or suggest “a graphical user interface adapted to allow a user to visually build a single workflow describing a multi-channel application capable of operating over a plurality of channels, the workflow comprising a plurality of layers, wherein each of said layers corresponds to at least one channel of said multi-channel application, wherein said single workflow comprises a plurality of states and a plurality of transitions, wherein each layer includes states and transitions common to at least one channel of said multi-channel application,” as required by amended claim 13.

Applicants submit that the Ambler reference fails to cure the deficiencies of the Flores and Christfort references.

For at least the foregoing reason, Applicants submit that the cited references fail to teach or suggest these recitations of claim 13. Accordingly, for at least the foregoing reasons, Applicants submit that claim 13, and its dependent claims 14 and 16-18, are patentable over the cited references.

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Conclusion

In conclusion, for at least the reasons given above, all of the pending claims are believed allowable. Should the Examiner have any questions or wish to further discuss this application, Applicants request that the Examiner contact the undersigned attorney at (480) 385-5060.

If for some reason Applicants have not requested a sufficient extension and/or have not paid a sufficient fee for this response and/or for the extension necessary to prevent abandonment on this application, please consider this as a request for an extension for the required time period and/or authorization to charge Deposit Account No. 50-2091 for any fee which may be due.

Respectfully submitted,

INGRASSIA FISHER & LORENZ

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